



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: PW4164  
 UNIQUE ID NUMBER: 7PW081  
 COMBUSTOR: Talon II  
 ENGINE TYPE: TF

BYPASS RATIO: 5.2  
 PRESSURE RATIO ( $\pi_{00}$ ): 30.1  
 RATED THRUST ( $F_{00}$ ) (kN): 284.7

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>00</sub> (g/kN) or SN	0.8	31.2	49.5	16.1
AS % OF ORIGINAL LIMIT	3.8	26.5	49.4	90.6
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			61.7	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			73.6	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			83.7	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			98.4	

### DATA STATUS

- PRE-REGULATION  
 x CERTIFICATION  
 - REVISED (SEE REMARKS)

### TEST ENGINE STATUS

- NEWLY MANUFACTURED ENGINES  
 x DEDICATED ENGINES TO PRODUCTION STANDARD  
 - OTHER (SEE REMARKS)

### EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE  
 (ANNEX 16 VOLUME II)

### CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)  
 x OUT OF PRODUCTION (DATE: - )  
 - OUT OF SERVICE (DATE: - )

### MEASURED DATA

MODE	POWER SETTING (%F <sub>00</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO <sub>x</sub>	
TAKE-OFF	100	0.7	2.668	0.00	0.19	23.87	12.5
CLIMB OUT	85	2.2	2.200	0.00	0.18	18.66	10.5
APPROACH	30	4.0	0.766	0.00	2.84	11.88	0.6
IDLE	7	26.0	0.240	0.37	17.73	4.99	0.0
LTO TOTAL FUEL (kg) or EMISSIONS (g)			961	139	7243	12150	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D <sub>p</sub> /F <sub>00</sub> (g/kN) or AVERAGE SN (MAX)				0.5	25.4	42.7	12.5
SIGMA (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)							
RANGE (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)							

### ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT - POWER SETTINGS  
 STAGE BLEED 0 (% CORE FLOW) AT - POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	101.4-102.3
TEMPERATURE (K)	279-282
ABS HUMIDITY (kg/kg)	0.0021-0.00355

### FUEL

SPEC	Jet A
H/C	1.94
AROM (%)	15.5

MANUFACTURER: Pratt & Whitney  
 TEST ORGANIZATION: Pratt & Whitney  
 TEST LOCATION: East Hartford, CT  
 TEST DATES: 10/04/2000

### NO<sub>x</sub> REGULATION PARAGRAPH

	2.3.2 c) (CAEP/4)
	2.3.2 d) (CAEP/6)
x	2.3.2 e) (CAEP/8)

### REMARKS

1. Data from Report PWA-7138

Compliance with Fuel Venting requirements:

- ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)